

Appl. No. 10/047,031
Amendment and/or Reply
to the Office Action of 25 April 2005

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2. REMARKS / DISCUSSION OF ISSUES

Claims 1-6, 8-11, 13-20 and 22-23 are pending in the application. Claims 1, 17, 22 and 23 are in independent form.

I. Claim Objections

The objection to claim 7 is believed to be moot in view of the present amendment.

II. New Claims

Applicants gratefully acknowledge the indication of allowability of claims 7-10 and 12-16. New claims 22 and 23 include the subject matter of objected-to claims 7 and 12, respectively. These claims and the claims that depend therefrom are now believed to be allowable. Allowance is earnestly solicited.

III. Rejection under 35 U.S.C. § 112, Second Paragraph

The rejection of claim 17 under 35 U.S.C. § 112 ¶ 2 is moot in view of the present amendment. Withdrawal of this rejection is earnestly solicited.

IV. Rejection under 35 U.S.C. § 102(a)

Claims 1-6 and 17-21 were rejected under 35 U.S.C. § 102(a) as being anticipated by *Lin*. ("Watermarking and Digital Signature Techniques for Multimedia Authentication and Copyright Protection" PhD Thesis Columbia University 2000). For at least the reasons set forth above, it is respectfully submitted that these rejections are improper and should be withdrawn.

A proper rejection under 35 U.S.C. § 102(a) requires that all of the claimed elements be found in the applied art. If a single claimed element is not found in the applied art, a prima facie case of anticipation cannot be properly established.

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A. Lin. Lacks the Disclosure of at least One Feature of Independent Claims 1 and 17

Claim 1 is drawn to a method of analyzing the correctness of an input signal, and features:

*"...determining a reliability of a hash bit;
and identifying a degree of similarity between said first robust
feature and said second robust feature."*

Claim 17 is drawn to a receiver and features:

*"...a bit reliability determining circuit adapted to determine if a hash bit is reliable;
and comparing means for identifying a degree of similarity between said first
robust feature and a second robust feature derived from an input signal so as to
obtain a similarity signal."*

In an example embodiment, the reliability of hash value(s) is determined. To this end, it is noted that it is unlikely that hash values without any bit errors will occur in processed signals (e.g., in lossy encoding schemes). In the example embodiment, a matching method uses soft information of the hash extraction algorithm to find the extracted hash values in the database. In particular, the probability that the hash bit has been received correctly is determined. In a specific embodiment, a bit reliability determining circuit 22 is implemented to meet the desired end. The bit reliability circuit 22 derives the reliability by comparison to a threshold. (Kindly refer to page 8, line 28-page 9, line 9 for support for the above assertions.)

The reference to *Lin* discloses an authentication system that provides a series of signatures that is an encrypted form of the feature codes or hashes of an image. The receiver decrypts the signature and compares the hash values to their corresponding values of the original signature. If there is a match, the image is said to be authenticated. However, in the section relied upon in the

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Office Action, Section 2.3, the reference to *Lin* fails to disclose the ***identifying a degree of similarity*** of the hash values, nor the ***determination of the reliability*** of the hash values.

As to the former, the cited portion of the reference to *Lin* merely indicates that the values may be a match. However, there are clearly a plethora of ranges (degrees) of similarity that may exist between the hash values. Thus, the cited portion of *Lin* fails to disclose identifying a degree of similarity of the hash values and only discloses that the values may match. Moreover, the undersigned have not found such a disclosure in other sections of *Lin*.

As to the latter, the cited section of *Lin* does not disclose determining the reliability of the hash values or a circuit for such determination. Furthermore, the undersigned has not found the disclosure of these features in other sections of the reference to *Lin*.

For at least the reasons set forth above, it is respectfully submitted that the reference to *Lin* lacks the disclosure of at least one of the features of claims 1 and 17. Therefore, claims 1 and 17 and the claims that depend therefrom are patentable over the applied art. Allowance is earnestly solicited.

V. Conclusion

In view of the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees, including, but not limited to, the fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Will S. Francos', with a long horizontal flourish extending to the right.

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Reg. 38,456

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